

## CALIFORNIA ENERGY COMMISSION

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March 1, 2007

Mr. Greg Trewitt  
Vice President  
Tierra Energy, Inc.  
710 S. Pearl Street, Suite A  
Denver, Colorado 80209

<b>DOCKET</b> <b>06-AFC-6</b>	
<b>DATE</b>	MAR 01 2007
<b>RECD.</b>	MAR 01 2007

Dear Mr. Trewitt:

**RE: THIRD ROUND DATA REQUESTS (#68- 75) EASTSHORE ENERGY CENTER (06-AFC-6)**

Pursuant to Title 20, California Code of Regulations, Section 1716, the California Energy Commission staff seeks the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the project, 2) assess whether the facility will be constructed and operated in compliance with applicable regulations, 3) assess whether the project will result in significant environmental impacts, 4) assess whether the facilities will be constructed and operated in a safe, efficient and reliable manner, and 5) assess potential mitigation measures.

This set of data requests (#68-75) is being made in the areas of Alternatives, Land Use, Traffic and Transportation and Waste Management. Written responses to the enclosed data requests are due to the Energy Commission staff on or before April 1, 2007, or at such later date as may be mutually agreeable.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, please send a written notice to both Commissioner Jeffrey Byron, Presiding Committee Member for the Eastshore Energy Center and to me within 10 days of receipt of this letter. The notification must contain the reasons for not providing the information, the need for additional time and the grounds for any objections (see Title 20, California Code of Regulations, section 1716 (f)).

If you have any questions, please call me at (916) 654-4640 or email me at [lprescot@energy.state.ca.us](mailto:lprescot@energy.state.ca.us).

Sincerely,

Lorne C. Prescott  
Project Manager

Enclosure

cc: Docket (06-AFC-6)  
Proof of Service List

Proof of Service List (Revised on 1-3-07)  
filed with Original Document. Mailed from  
Sacramento on 2-1-07.

**EASTSHORE ENERGY CENTER  
(06-AFC-6)  
DATA REQUESTS**

**Technical Area: Alternatives**

**Author:** Lorne Prescott

**BACKGROUND**

The Eastshore project site is approximately 1 1/2 miles southwest of the Hayward Executive Airport and would be within the Airport Approach Zoning Plan boundaries. These boundaries extend approximately two (2) miles out from the landing area of the airport. The project's stacks and resulting hot air exhaust plume would introduce the potential for impacts to aircraft flying over the site. Pursuant to the Hayward Municipal Code (HMC) §10-6.35, "...no use may be made of land within any airport approach zone, airport turning zone, or airport transition zone in such a manner as to...endanger the landing, take off, or maneuvering of aircraft."

The Eastshore Energy Center Application for Certification page 9-5, Table 9-3.1 provides a brief description for the proposed project site and six alternative sites.

**DATA REQUEST**

68. Please compare the proposed site to the identified alternative sites that are within the 2-mile airport approach zone with regard to aviation safety and consistency with uses within the Hayward Airport Approach Zoning Plan (HMC §10-6.35).

**EASTSHORE ENERGY CENTER  
(06-AFC-6)  
DATA REQUESTS**

**Technical Area: Land Use**

**Author:** James Adams

**BACKGROUND**

The Eastshore project site is approximately 1 1/2 miles southwest of the Hayward Executive Airport and would be within the Airport Approach Zoning Plan boundaries. These boundaries extend approximately two (2) miles out from the landing area of the airport. The project's stacks and resulting hot air exhaust plume would introduce the potential for impacts to aircraft flying over the site. Pursuant to the Hayward Municipal Code (HMC) §10-6.35, "...no use may be made of land within any airport approach zone, airport turning zone, or airport transition zone in such a manner as to...endanger the landing, take off, or maneuvering of aircraft."

**DATA REQUEST**

69. As it relates to potential aviation hazards, please discuss the suitability of the proposed project site and its consistency with uses within the Hayward Airport Approach Zoning Plan (HMC §10-6.35).

**EASTSHORE ENERGY CENTER  
(06-AFC-6)  
DATA REQUESTS**

**Technical Area: Traffic and Transportation**

**Author:** Shaelyn Strattan

**BACKGROUND**

The Eastshore project site is approximately 1-1/2 miles southwest of the Hayward Executive Airport and would be within the Airport Approach Zoning Plan boundaries. These boundaries extend approximately two (2) miles out from the landing area of the airport. The project's stacks and resulting hot air exhaust plumes would introduce the potential for impacts to aviation safety and the safe maneuvering of aircraft within this area. Per the Hayward Municipal Code (HMC) §10-6.35, "...no use may be made of land within any airport approach zone, airport turning zone, or airport transition zone in such a manner as to...endanger the landing, take off, or maneuvering of aircraft."

Staff has been advised by the Hayward Airport Acting Manager, the Federal Aviation Administration (FAA), and Alameda Airport Land Use Commission staff that aircraft traverse the area at altitudes as low as 400 feet above ground level (agl) and regularly fly over the area at altitudes below 1000 feet agl. The Hayward Executive Airport averages approximately 400 airport operations per day. Smaller single and two-engine aircraft, rotor craft (such as helicopters), and ultra-light or experimental aircraft are particularly susceptible to low level turbulence. The AFC provides no discussion of potential plume impacts or analysis of plume velocity, heat dispersal, or other plume characteristics that might contribute to low altitude turbulence in AFC §8.10 (Traffic & Transportation). Analyses of the velocity, shape, and dispersal of the exhaust plumes are necessary for staff to determine the potential impact of plumes generated by the Eastshore facility on aircraft flying in the immediate vicinity of the project.

**DATA REQUEST**

70. Please provide a detailed plume analysis for the thermal plumes generated by the Eastshore facility's exhaust stacks, including:
  - a) Frequency of plume generation, velocity, shape, continuity, and dispersal of plume(s), up to and including 2000 feet agl.
  - b) Meteorological impacts on plume formation and behavior. Provide the name of the computer model used and its inputs and outputs.
  - c) Potential impacts to air mass stability and aircraft operations in the area affected by the plumes. Please consider elements such as aircraft type, speed, and altitude; low visibility; cool temperatures; and calm winds when evaluating potential aviation impacts.

**BACKGROUND**

As noted in AFC §2.1.1, the Eastshore project includes construction of fourteen (14) exhaust stacks, 70 feet in height, that would emit an accelerated heat plume at a temperature of up to 700°F. The stacks are all aligned, which could create the potential

**EASTSHORE ENERGY CENTER  
(06-AFC-6)  
DATA REQUESTS**

for individual plumes to merge, increasing the plume's breadth and intensity. Title 14, Part 77 of the Code of Federal regulations (14 CFR 77), "Objects Affecting Navigable Airspace", requires that the FAA be notified of proposed construction that may affect aviation safety and navigable airspace, in compliance with 49 USC §44718. This allows the FAA the opportunity to identify and minimize potentially adverse effects on aviation. Although the stacks proposed for the Eastshore project do not physically exceed the maximum height limits for structures within affected airspace, the thermal plumes may extend into navigable airspace and create a recurring impact that could result in low altitude, clear air turbulence (CAT). Energy Commission staff's discussions with FAA personnel resulted in a request from the FAA for the Applicant to file FAA Form 7460-1 and include the applicable plume information. FAA staff also recommends that the applicant include a cover letter with the application requesting the project be specifically reviewed by the FAA's Air Traffic Division, in addition to the normal routing and review process. In support of this request, it should be noted that an aviation safety report entitled "Safety Risk Analysis of Aircraft Overflight of Industrial Exhaust Plumes" was completed in January 2006 and is currently under review by the FAA Aviation Safety staff. In that document, it is recommended that instructions for FAA Form 7460-1 (Notice of Proposed Construction or Alteration) be amended to require a thorough explanation of the nature of any exhaust plume discharge.

**DATA REQUEST**

71. Complete and electronically file FAA Form 7460-1 (Notice of Proposed Construction or Alteration). Prior to filing, please submit a copy of the draft project description section of Form 7460-1 to Energy Commission staff for review and comments. The project description should thoroughly explain the nature of the exhaust plume discharge, including the data generated in response to Data Request #70
72. Please provide a copy of the final filed FAA Form 7460-1 to Energy Commission staff and the Alameda Airport Land Use Commission.

**EASTSHORE ENERGY CENTER  
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**BACKGROUND**

Energy Commission staff is uncertain about the potential for the air cooled condenser to create thermal plumes that would extend into navigable airspace. Additional information is needed to determine if any plumes created would present a hazard to aviation.

**DATA REQUEST**

73. Please provide the following information for the two air cooled condensers:

- a) total design heat rejection load (MW or MMBtu/hr),
- b) the number of stack(s)/openings,
- c) a description of whether the stacks/openings are round or rectangular,
- d) the diameter or cross section area of each stack/opening,
- e) the stack opening exhaust velocity,
- f) the ACC total exhaust mass flow rate, and
- g) the exhaust release height.

**EASTSHORE ENERGY CENTER  
(06-AFC-6)  
DATA REQUESTS**

**Technical Area: Waste Management**

**Author:** Suzanne Phinney

**BACKGROUND**

AFC page 8.13-3 states that the primary waste generated during operation of the Eastshore facility will be non-hazardous solid waste. Although Section 8.13.4.2 states that "the types of waste and their estimated quantities are discussed below," the immediately following discussion on non-hazardous solid waste describes only landfill disposal options. No discussion of type or quantity of non-hazardous waste is provided.

**DATA REQUEST**

74. Please describe and quantify (in both tons and cubic yards) the non-hazardous solid waste that will be generated during project operations.

**BACKGROUND**

Written communication from the City of Hayward (October 20, 2006 and January 12, 2007) notes that the Phase I Environmental Site Assessment does not bear the stamp of a registered professional. American Society of Testing and Materials (ASTM) E1527-05, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process", states in Section 12.12: "Signature-The environmental professional(s) responsible for the Phase I Environmental Site Assessment shall sign the report." Additionally, both ASTM E1527-00 and U.S. EPA have identified qualifications for environmental professionals assessing site conditions. EPA's All Appropriate Inquiries Rule became effective in November 2006 and provides more specificity than the ASTM standard. At a minimum, an environmental professional must have:

- A state or tribal issued certification or license and three years of relevant full-time work experience; or
- A Baccalaureate degree or higher in science or engineering and five years of relevant full-time work experience; or
- Ten years of relevant full-time experience.
- An environmental professional may also qualify through certification or license requirements, including:
  - A current Professional Engineer's (P.E.) License;
  - A current Professional Geologist's (P.G.) License;

**DATA REQUEST**

75. Please provide documentation, including a copy of the Phase I ESA page stamped by the registered professional, that the Phase I ESA meets all professional requirements.

**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION  
OF THE STATE OF CALIFORNIA**

**APPLICATION FOR CERTIFICATION  
FOR THE EASTSHORE ENERGY CENTER  
IN HAYWARD  
BY TIERRA ENERGY OF TEXAS**

**Docket No. 06-AFC-6**

**PROOF OF SERVICE**  
(Revised 1/3/07)

**INSTRUCTIONS: All parties shall either (1) send an original signed document plus 12 copies or (2) mail one original signed copy AND e-mail the document to the address for the Docket as shown below, AND (3) all parties shall also send a printed or electronic copy of the document, which includes a proof of service declaration to each of the individuals on the proof of service list shown below:**

**CALIFORNIA ENERGY COMMISSION**

Attn: Docket No. 06-AFC-6  
1516 Ninth Street, MS-4  
Sacramento, CA 95814-5512  
[docket@energy.state.ca.us](mailto:docket@energy.state.ca.us)

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## **INTERESTED AGENCIES**

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## **INTERVENORS**

None at this time

## **ENERGY COMMISSION**

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## **DECLARATION OF SERVICE**

I, Geoffrey W. Carter, declare that on 03-01-2007, I deposited copies of the attached RE: THIRD ROUND DATA REQUESTS (#68-75) EASTSHORE ENERGY CENTER (06-AFC-6) in the United States mail at Sacramento, California with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above.

*OR*

Transmission via electronic mail was consistent with the requirements of the California Code of Regulations, title 20, sections 1209, 1209.5, and 1210. All electronic copies were sent to all those identified on the Proof of Service list above.

I declare under penalty of perjury that the foregoing is true and correct.



**[signature]**